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| 10/721,627 | 11/25/2003 | Mike Suekawa | 200208870-1 | 7726 |

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EXAMINER

NGUYEN, HUNG THANH

ART UNIT PAPER NUMBER

2841

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,627

Applicant(s)

SUEKAWA ET AL.

Examiner

HUNG T. NGUYEN

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2841

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claim 1-13 and 21, drawn to Toolless Circuit Printed Circuit Carrier Assembly, classified in class 361, subclass 724.
- II. Claim 14-20, drawn to method of manufacturing, classified in class 29, subclass 831. The inventions are distinct, each from the other because of the following reasons:

Inventions 2 and 1 are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the toolless retention feature is configured to retain the printed circuit assembly.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with K n J. K estn on 7/5/2005 a provisional election was made with traverse to prosecute the invention of group I, claim 1-13 and 21. Affirmation of this election must be made by applicant in replying to this Office action. Claim 14-20 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 2841

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-5, 7-11 and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi (US 4901204).

Regard claim 1, 21: Hayashi discloses in figure 12 a printed circuit assembly carrier comprising: a carrier frame (embodiment of figure 12) configured to hold a selected printed circuit assembly (73, 74) of at least two different printed circuit assemblies (73, 74) in at least two different orientations (as shown in figure 12, boards are capable of placing in different orientation); a first toolless retention (24) feature coupled to a first surface of the carrier frame (embodiment of figure 12) and configured to retain the selected printed circuit assembly (73, 74); and a second toolless retention (58) feature coupled to a second surface of the carrier frame (embodiment of figure 12) and configured to retain another printed circuit assembly (73, 74) in at least one of the orientations.

Regard claim 2: Hayashi discloses the carrier frame (explain in claim 1) is constructed from molded plastic (see column 3, line 38-40).

Regard claim 3: Hayashi discloses in figure 12 the carrier frame (explain in claim 1) comprises a first member (24, 76) having parallel opposing planar

Art Unit: 2841

surfaces including an interior planar surface (the surface below mounting board 73) and an exterior planar surface (the surface's base of 72), the exterior planar surface (the surface's base of 72) being the first surface coupled to the first toolless retention (24) feature, the interior planar surface the surface's base of 72) being capable of receiving and retaining the selected printed circuit assembly (explain in claim 1).

Regard claim 4: Hayashi discloses in figure 12 the carrier frame (explain in claim 1) comprises a second member (17, 77) coupled at an end of the first member (24, 76) substantially perpendicular to the first member (24, 76), the second member (17, 77) extending beyond the interior planar surface (explain in claim 3) to the second surface (104 in figure 13) that couples to the second toolless retention (explain in claim 1) feature.

Regard claim 5: Hayashi disclose the carrier frame is constructed from plastic (explain in claim 2); and the first (explain in claim 1) and second toolless retention (explain in claim 1) features are plastic snaps extending from the carrier frame (explain in claim 1).

Regard claim 7: Hayashi discloses in figure 12 an electronic device assembly comprising: a housing (see abstract); first (explain in claim 1) and second printed circuit assemblies (explain in claim 1) of respective first (explain in claim 1) and second (explain in claim 1) types capable of coupling to the housing (see abstract); a plurality of identical printed circuit assembly carriers (see figure 12 of board-assembly carriers to hold boards 2, 4, 6) capable of coupling the first (explain in claim 1) and second printed circuit assemblies (explain in claim 1) to

Art Unit: 2841

the housing (see abstract), the carriers coupling the printed circuit assemblies of different types to the housing (see abstract) in different orientations (as shown in figure 12, boards are capable of placing in different orientation) via toolless retention (58, 76) features.

Regard claim 8: Hayashi discloses 1, 2 the electronic device assembly further comprising: a third printed circuit assembly (boards 6) capable of coupling to a side of the housing (see abstract).

Regard claim 9: Hayashi discloses in figure 1, 2 the electronic device assembly further comprising: a third printed circuit assembly (board 6) capable of coupling to a side of the housing (see abstract), the third printed circuit assembly (board 6) being substantially planar and having a first planar (lower surface side of board 6 which is its side facing downward) side capable of coupling to the housing (see abstract) and a second opposing planar side, wherein a first (explain in claim 1) of the plurality of identical printed circuit assembly carriers (embodiment of figure 12) couples the first printed circuit assembly (explain in claim 1) to the second planar side of the third printed circuit assembly (see figure 1, 2 of board 6).

Regard claim 10: Hayashi discloses the electronic device assembly further comprising: a third printed circuit assembly (explain in claim 8) capable of coupling to a side of the housing (see abstract), the third printed circuit assembly (explain in claim 8) being substantially planar and having a first planar side (explain in claim 9) capable of coupling to the housing (see abstract) and a second opposing planar side, wherein a second of the plurality of identical printed circuit assembly carriers (embodiment of figure 12) couples the second

Art Unit: 2841

printed circuit assembly (explain in claim 1) substantially perpendicular to the third printed circuit assembly (explain in claim 8).

Regard claim 11: Hayashi discloses the electronic 1, 2 device assembly wherein the second printed circuit assembly (4) and the second of the two identical printed circuit assembly carriers (embodiment of figure 12) are implemented for usage of the electronic device assembly in a duplex configuration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6, 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Solheid et al. (US 2004/0146266)

Regard claim 6, 13: Hayashi discloses all the elements of an electronic device assembly as described above with respect to claim 7 except Hayashi does not disclose the cable retention.

Solheid et al. discloses the cable retention.

Hayashi and Solheid et al. are analogous art because they are from the same field of endeavor to make electronic assemblies.

At the time of invention, it would have been obvious to a person of ordinary skill in the art, to make of Hayashi in the assembly of Solheid include the retention.

Art Unit: 2841

The suggestion or motivation for doing so would have been obvious in view of the teaching of Solheid et al. that having cable retention is good to organize the loose wires and keep space for chassis.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 4901204) function and Gaio et al. (US 5901263)

Regard claim 12: Hayashi discloses all the elements of an electronic device assembly as described above with respect to claim 7 except Hayashi does not disclose the hard disk drive and the duplex printed circuit assembly.

Gaio et al. discloses the hard disk drive and the duplex printed circuit assembly.

Hayashi and Gaio et al. are analogous art because they are from the same field of endeavor to make electronic assemblies.

At the time of invention, it would have been obvious to a person of ordinary skill in the art, to attach of Hayashi in the assembly of Gaio et al. included the hard disk drive and duplex printed circuit assembly.

The suggestion or motivation for doing so would have been obvious in view of the teaching of Gaio et al. that having the hard disk drive is used for the storage and duplex printed circuit assembly is to provide the duplex communication.

Relevant Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Ruff (US 6831840) teaches the bracket assembly, Spychalla (US 2005/011249) teaches the data storage and Laub (US 5713744) teaches the integrate circuit socket

Art Unit: 2841

Conclusion

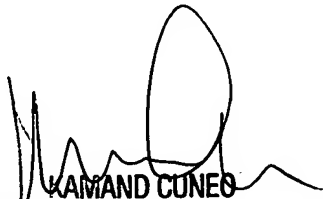
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG T. NGUYEN whose telephone number is 571-272-5983. The examiner can normally be reached on 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMMIE CUNEO can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

HN

Hung Thanh Nguyen

July 11, 2005


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